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### CHAIN OF CUSTODY REPORT

Environmental Laboratory Network www.ncalabs.com	CHA	IN (	)F (	CUS	ТО	DY	RE	PO	RT			Wo	rk (	)rd	er #:	P16	10205		2
CLIENT: BRISTOL					INVO	ICE TO	:								TURN		REQUEST in Busi	ness Days	;*
REPORT TO: ANNE KRAT	MWETH	ER			BR	45	101									Organio 5	c & Inorganic Analyses 4 3 2	15716	
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PHONE: 907.770.09	Y A				11.0. N		QUESTE			5					ST	D.	Please Specify		
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30 July, 2001

Anne Krarawetter Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are amended results of analyses for samples received by the laboratory on 07/06/01 18:40. If you have any questions concerning this report, please feel free to contact me. These results supercede all previous results reported by the laboratory.

Sincerely,

Jerry Orlando

Project Manager/QA

Work Orders included in this report:

P1G0205



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

#### ANALYTICAL REPORT FOR SAMPLES - Amended

Sample ID	Laboratory ID	Matrix		
01AMA19U03SL			Date Sampled	Date Received
01AMA19U04SL	P1G0205-01	Soil	07/03/01 17:00	07/06/01 18:40
	P1G0205-02	Soil	07/03/01 17:05	07/06/01 18:40
01AMA19U05SL	P1G0205-03	Soil	07/03/01 17:10	07/06/01 18:40
01AMA19U06SL	P1G0205-04	Soil	07/03/01 17:15	07/06/01 18:40
01AMA19U07SL	P1G0205-05	Soil		
01AMA19U08SI.	P1G0205-06		07/03/01 17:20	07/06/01 18:40
01AMA19U09SL		Soil	07/03/01 17:25	07/06/01 18:40
NAME TANDASE	P1G0205-07	Soil	07/03/01 17:30	07/06/01 18:40

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network** 

Page 1 of 47



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** lssued: 07/30/01 16:44

### Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA19U03SL (P1G0205-01) Soil					Sampled: 07/03	3/01 Rece	ived: 07/06/		
Gasoline Range Organics	ND	2.64	mg/kg dry	1	AK101/8021B	07/10/01			
Benzene	ND	0.0661	" " " " " " " " " " " " " " " " " " "	"	#	07/10/01	07/10/01 "	1071099	
Toluene	ND	0.0661	11		n	 H	" "	π ••	
Ethylbenzene	ND	0.0661	#		п		" n		
Xylenes (total)	ND	0.0661	*	**	*		" **	4	
Surr: a,a,a-TFT (FID)	83.0 %	60-140						<del></del>	
Surr: a,a,a-TFT (PID)	73.2 %	60-140							
01AMA19U04SL (P1G0205-02) Soil					Sampled: 07/03	2/01 Paga		0.1	
Gasoline Range Organics	ND	2,99	mg/kg dry	1	AK101/8021B		ived: 07/06/		
Benzene	ND	0.0748	mg/kg uiy	1 11	AK101/8021B	07/10/01	07/10/01	1071099	
Toluene	ND	0.0748	H	Ħ	77	н		"	
Ethylbenzene	ND	0.0748	#	17	,	 H	" N	"	
Xylenes (total)	ND	0.0748		*	H	w w		,	
Surr: a,a,a-TFT (FID)	96.7 %	60-140	<del></del>						
Surr: a,a,a-TFT (PID)	85.3 %	60-140							
01AMA19U05SL (P1G0205-03) Soil					Sampled: 07/03	3/01 Recei	ived: 07/06/0	<b>11</b>	
Gasoline Range Organics	ND	2.54	mg/kg dry	1	AK101/8021B	07/10/01	07/11/01	1071099	
Benzene	ND	0.0636	n	#	"	и	07/11/01 H	10/1099	
Toluene	ND	0.0636	н	*	*	**	Ħ	н	
Ethylbenzene	ND	0.0636	47		**	**	n	н	
Xylenes (total)	ND	0.0636	n	n	¥		n	11	
Surr: a,a,a-TFT (FID)	94.6 %	60-140							
Surr: a,a,a-TFT (PID)	83.2 %	60-140							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

# Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Dronore d	A malauma d	Datab	
01AMA10106SL (D1C0205 0.0 C "				- Junion	Wend	Prepared	Analyzed	Batch	Note
01AMA19U06SL (P1G0205-04) Soil					Sampled: 07/03	3/01 Rece	ived: 07/06/0	01	
Gasoline Range Organics	ND	3.01	mg/kg dry	1	AK101/8021B	07/10/01	07/11/01	1071099	
Benzene	ND	0.0753	Ħ	77	Ħ	*	7	#	
Toluene	ND	0.0753	n	**	R	**		Ħ	
Ethylbenzene	ND	0.0753	u	*	**	n	**	**	
Xylenes (total)	ND	0.0753	**	**	n	н	"	11	
Surr: a,a,a-TFT (FID)	97.3 %	60-140			· · · · · · · · · · · · · · · · · · ·				
Surr: a,a,a-TFT (PID)	84.0 %	60-140							
01AMA19U07SL (P1G0205-05) Soil					Sampled: 07/03	8/01 Rece	ived: 07/06/0	N1	
Gasoline Range Organics	ND	2.55	mg/kg dry	1	AK101/8021B				
Benzene	ND	0.0638	mg/kg diy	1 H	# #	07/10/01	07/11/01	1071099	
Toluene	0.0716	0.0638	lt .	н	,	11	н	,	
Ethylbenzene	ND	0.0638	17	н	**			,,	
Xylenes (total)	ND	0.0638	н	н		н	11		
Surr: a,a,a-TFT (FID)	97.9 %	60-140							
Surr: a,a.a-TFT (PID)	85.6 %	60-140							
01AMA19U08SL (P1G0205-06) Soil					Sampled: 07/03	3/01 Rece	ived: 07/06/0	)1	
Gasoline Range Organics	ND	3.56	mg/kg dry	1	AK101/8021B	07/10/01	07/11/01	1071099	
Benzene	ND	0.0891	"	'n	"	U//10/U1	W W	10/1022	
Toluene	ND	0.0891	"	11	н	11	и	Ħ	
Ethylbenzene	ND	0.0891	n	н	**	n	Ħ	**	
Xylenes (total)	ND	0.0891	н	н	**	ır	#	**	
Surr: a,a,a-TFT (FID)	97.2 %	60-140					··		
Surr: a,a,a-TFT (PID)	85.7%	60-140							

North Creek Analytical - Portland

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2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report

Issued: 07/30/01 16:44

### Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U09SL (P1G0205-07) Soil					Sampled: 07/03	3/01 Rece	ived: 07/06/	01	
Gasoline Range Organics	ND	2.81	mg/kg dry	i	AK101/8021B	07/10/01	07/11/01	1071099	
Benzene	ND	0.0704	ti	,	#	07/10/01	07/11/UI #	10/1099	
Toluene	ND	0.0704	er .	11	Ħ	n	11	,	
Ethylbenzene	ND	0.0704	**	17		Ħ	11		
Xylenes (total)	ND	0.0704	н	**	#	n	•	If	
Surr: a,a,a-TFT (FID)	95.0 %	60-140							
Surr: a,a,a-TFT (PID)	83.1 %	60-140							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U03SL (P1G0205-01) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	<del>-</del>
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/12/01	1071114	
Residual Range Organics	ND	50.0	H	*	"	11	н	TO/1114	
Surr: 1-Chlorooctadecane	81.0%	75-125	-						
Surr: Triacontane	103 %	50-150							
01AMA19U04SL (P1G0205-02) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/12/01	1071114	
Residual Range Organics	ND	50.0	"	0	n	4	"	"	
Surr: 1-Chlorooctadecane	79.9 %	75-125							
Surr: Triacontane	103 %	50-150							
01AMA19U05SL (P1G0205-03) Soil			•		Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/12/01	1071114	
Residual Range Organics	ND	50.0	н	q		#	11	"	
Surr: 1-Chlorooctadecane	77.9 %	75-125					-		
Surr: Triacontane	106 %	50-150							
01AMA19U06SL (P1G0205-04) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/12/01	1071114	
Residual Range Organics	ND	50.0		•	n	P	н	n	
Surr: 1-Chlorooctadecane	74.4 %	75-125							S-07
Surr: Triacontane	103 %	50-150							
01AMA19U07SL (P1G0205-05) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	<b>'01</b>	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/12/01	1071114	
Residual Range Organics	ND	50.0	"	n		**	17	11	
Surr: 1-Chlorooctadecane	78.6 %	75-125							
Surr: Triacontane	109 %	50-150							

North Creek Analytical - Portland

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Bristol Environmental & Engineering

2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U08SL (P1G0205-06) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/12/01	1071114	
Residual Range Organics	ND	50.0	Ħ	H	н	**	**	47	
Surr: 1-Chlorooctadecane	80.2 %	75-125							
Surr: Triacontane	106 %	50-150							
01AMA19U09SL (P1G0205-07) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/11/01	07/13/01	1071114	
Residual Range Organics	ND	50.0		#	51	"	* .	**	
Surr: 1-Chlorooctadecane	75.1 %	75-125							
Surr: Triacontane	92.3 %	50-150							

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network** 

Page 6 of 47



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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

### Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U03SL (P1G0205-01) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/		
Arsenic	1.05	0.500	mg/kg dry	1	EPA 6020	07/16/01			
Barium	31.7	1.00	" Bride or y	10	EI A 0020	U//16/UI	07/21/01	1071299	
Cadmium	ND	0.500	**	#		"	07/21/01		
Chromium	9.98	0.500	Įt.		,		07/21/01		
Lead	ND	10.0	Ħ	**			,		
Nickel	21.8	1.00	#	n n		"		#	R-06
Vanadium	53.1	2.50	Ħ	1	17	" "	07/21/01 "	11	
01AMA19U04SL (P1G0205-02) Soil				S	Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
Arsenic	1.07	0.500	mg/kg dry	1	EPA 6020	07/16/01	07/21/01	1071299	
Barium	29.9	1.00	"	10	"	7710,01	07/21/01	10/12/9	
Cadmium	ND	0.500	н	"	u		07/21/01	er er	
Chromium	9.00	0.500	Ħ	P	n		n	н	
Lead	ND	10.0	11		Ħ	19	**	**	R-06
Nickel	21.8	1.00	*	11	**	**	07/21/01	<b>7</b>	K-00
Vanadium	52.7	2.50	Ħ	1	Ħ	n	97721701 #	n	
01AMA19U05SL (P1G0205-03) Soil				S	Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
Arsenic	1.32	0.500	mg/kg dry	1	EPA 6020	07/16/01	07/21/01	1071299	
Barium	30.5	1.00	"	10	H	11	07/21/01	10712 <del>99</del>	
Cadmium	ND	0.500	11	#	н	11	07/21/01	,	
Chromium	11.1	0.500	n	**	**	,,	#	"	
Lead	ND	10.0	If	n	71	n	11	**	R-06
Nickel	24.1	1.00	11	m	n	н	07/21/01	**	10-00
Vanadium	63.1	2.50	11	i	н		m		

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U06SL (P1G0205-04) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/	n1	
Arsenic	1.43	0.500	mg/kg dry	1	EPA 6020	07/16/01			<del></del>
Barium	36.2	1.00	gragus	10	LI A 0020	0//10/UI #	07/21/01	1071299	
Cadmium	ND	0.500	n	H	n		07/21/01	"	
Chromium	13.1	0.500	11	**	**	 H	07/21/01	,,	
Lead	ND	10.0	11	**	11	 H	"	"	
Nickel	24.3	1.00	n	**		11	07/21/01	"	R-06
Vanadium	8.37	2.50	#	1	**	n	07/21/01	ŋ	
01AMA19U07SL (P1G0205-05) Soil				S	Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Arsenic	3.97	0.500	mg/kg dry	1	EPA 6020	07/16/01	07/21/01	1071299	
Barium et al. 1915	52.4	1.00		10	11	Ħ	07/21/01	m	
Cadmium	ND	0.500	н	*	11		07/21/01	11	
Chromium	13.6	0.500	n		**	п	07/21/01		
Lead	ND	10.0	11	11	Ħ	11	"	19	R-06
Nickel	26.4	1.00	н		*	,,	07/21/01	11	K-00
Vanadium	88.5	2.50	11	1	Ħ	ıı	#	и	
01AMA19U08SL (P1G0205-06) Soil				S	Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Arsenic	1.96	0.500	mg/kg dry	1	EPA 6020	07/16/01	07/21/01	1071299	
Barium	47.5	1.00	H	10	n	H	07/21/01	#	
Cadmium	ND	0.500	**	H	11	**	07/21/01	11	
Chromium	17.9	0.500	11	Ħ	n	n	#	11	
Lead	ND	10.0	"	**	**		11		R-06
Nickel	25.8	1.00	N	,	11	11	07/21/01	#	K-00
Vanadium	118	2.50	**	1	π.		U//21/UI		

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Total Metals per EPA 6000/7000 Series Methods

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U09SL (P1G0205-07) Soil				9	Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Arsenic	1.26	0.500	mg/kg dry	1	EPA 6020	07/16/01	07/21/01	1071299	
Barium	44.3	1.00	"	10	H	n	07/21/01	π	
Cadmium	ND	0.500		e e	h	#	07/21/01	н	
Chromium	22.5	0.500	n	u	н	*	97721701 N		
Lead	ND	10.0	*	п	*	#		*	R-06
Nickel	29.8	1.00	11	**	*	,	07/21/01	#	K-00
Vanadium	131	2.50	n	1	q	н	"	н	

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North Creek Analytical, Inc. **Environmental Laboratory Network** 

Page 9 of 47



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

#### Polychlorinated Biphenyls per EPA Method 8082 North Creek Analytical - Portland

	1101	III Creek	Anaiyti	cai - ru	ruano				
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA19U03SL (P1G0205-01) Soil				S	Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/10/01	07/13/01	1071014	
Aroclor 1221	ND	134	*		"	#	#	10/1014	
Aroclor 1232	ND	67.0	tr	*		H	11	**	
Aroclor 1242	ND	67.0	11	н	•	п		n	
Aroclor 1248	ND	67.0	Ħ	H	n	77	"	It	
Aroclor 1254	ND	67.0	11	Ħ	11	₩		tr	
Aroclor 1260	ND	67.0	11	н	n		**	Ħ	
Surr: 2,4,5,6-Tetrachloro-m-xylene	81.3 %	63-119							
Surr: Decachlorobiphenyl	92.1 %	52-131							
DIAMA19U04SL (P1G0205-02) Soil				5	Sampled: 07/0	3/01 Recei	ived: 07/06/	) i	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/10/01	07/13/01	1071014	
Aroclor 1221	ND	134	ug ng uiy	H	EFA 6082	07/10/01	07/13/01	10/1014	
Aroclor 1232	ND	67.0	10		n		n		
Aroclor 1242	ND	67.0	11	"	Ħ	#		,,	
Aroclor 1248	ND	67.0	17		H	*	n		
Aroclor 1254	ND	67.0	**	"	n	H	77	,	
Aroclor 1260	ND	67.0	**	,,	n	n	**	n	
Surr: 2,4,5,6-Tetrachloro-m-xylene	94.6 %	63-119							
Surr: Decachlorobiphenyl	105 %	52-131							
01AMA19U05SL (P1G0205-03) Soil				S	Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/10/01	07/13/01	1071014	
Aroclor 1221	ND	134	"		"	"	"	. J/1017	
Aroclor 1232	ND	67.0	11	11	**	п	u	u	
Aroclor 1242	ND	67.0	11	"	<b>#</b>	Ħ	u	er .	
Aroclor 1248	ND	67.0	*		п	#	**		
Aroclor 1254	ND	67.0	11	n	m		"	•	
Aroclor 1260	ND	67.0	**	•	n	*	**	0	
Surr: 2,4,5,6-Tetrachloro-m-xylene	88.4 %	63-119		·					
Surr: Decachlorobiphenyl	100 %	52-131				<u>-</u>			

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter Amended Report Issued: 07/30/01 16:44

#### Polychlorinated Biphenyls per EPA Method 8082

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Drange 4	Amalumad	Datah	Mari
	Meanit	Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA19U06SL (P1G0205-04) Soil				S	Sampled: 07/0	3/01 Recei	ived: 07/06/0	)1	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/10/01	07/13/01	1071014	
Aroclor 1221	ND	134	n	**	tr		я	Ħ	
Aroclor 1232	ND	67.0	н	11	Ħ	*	•	"	
Aroclor 1242	ND	67.0	11	n		r	11		
Aroclor 1248	ND	67.0	**	n	lt.	В	Ħ	n	
Aroclor 1254	ND	67.0	*	11	Ħ	11	11	#	
Aroclor 1260	ND	67.0	**	H	Ħ	n	n	H	
Surr: 2,4,5,6-Tetrachloro-m-xylene	89.2 %	63-119							
Surr: Decachlorobiphenyl	98.2 %	52-131							
01AMA19U07SL (P1G0205-05) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/10/01	07/13/01	1071014	
Aroclor 1221	ND	134		P	*	u u	*1	"	
Aroclor 1232	ND	67.0	**	11	п	"		"	
Aroclor 1242	ND	67.0	4	**	tr	P	n	Ħ	
Aroclor 1248	ND	67.0	n	"	**	**	п	M	
Aroclor 1254	ND	67.0	*	n	n	Ħ	"		
Aroclor 1260	ND	67.0	11	*	"	11	ır	11	
Surr: 2,4,5,6-Tetrachloro-m-xylene	73.2 %	63-119							
Surr: Decachlorobiphenyl	85.8 %	52-131							
01AMA19U08SL (P1G0205-06) Soil					Sampled: 07/0	03/01 Rece	ived: 07/06/	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1221	ND	134	н			n	**	n	
Aroclor 1232	ND	67.0	n	11	11	**	*	**	
Aroclor 1242	ND	67.0	11	11	**	11	*	Ħ	
Aroclor 1248	ND	67.0	н	Ħ	n	Ħ	11	Ħ	
Aroclor 1254	ND	67.0	**	"	11	II .	n	"	
Aroclor 1260	ND	67.0	"	#	**	#		"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	95.0 %	63-119							
Surr: Decachlorobiphenyl	113%	52-131							

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2000 W. International Airport Rd. #C-Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

## Polychlorinated Biphenyls per EPA Method 8082

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U09SL (P1G0205-07) Soil				5	Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1221	ND	134	"	n	n	H	11	"	
Aroclor 1232	ND	67.0	u		"	н	н	n	
Aroclor 1242	ND	67.0	я		ıı .	ır	п	n	
Aroclor 1248	ND	67.0	11	H			*	n	
Aroclor 1254	ND	67.0	H	11		u	*	73	
Aroclor 1260	ND	67.0	**	11	*	*	"		
Surr: 2,4,5,6-Tetrachloro-m-xylene	94.5 %	63-119				***			
Surr: Decachlorobiphenyl	112 %	52-131							

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

# Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U03SL (P1G0205-01) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
Acetone	ND	1650	ug/kg dry	. 1	EPA 8260B	07/14/01	07/15/01	1071265	
Benzene	ND	66.1	11	8	#	Ф	Ħ	*	
Bromobenzene	ND	66.1	Ħ	ħ	•			п	
Bromochloromethane	ND	66.1	Ħ	n	lt.	n	11	11	
Bromodichloromethane	ND	66.1	п	Ħ	н	n	н	н	
Bromoform	ND	66.1	Ħ	n	ty .	11	ŧŧ	li .	
Bromomethane	ND	330	n	11	Pt.		**	**	
2-Butanone	ND	661	н	I†	**	*	••	*	
n-Butylbenzene	ND	330	**		**	•	н		
sec-Butylbenzene	ND	66.1	и	te .	11	n	11	**	
tert-Butylbenzene	ND	66.1	**	*	n	п	tt	11	
Carbon disulfide	ND	661	•	**	Ħ	н	. 11	n	
Carbon tetrachloride	ND	66.1	Ħ	**	•	п	H	n	
Chlorobenzene	ND	66.1	n	11	п	**	Ħ	n	
Chloroethane	ND	66.1	11	11	н	Ħ	17	N	
Chloroform	ND	66.1	*	н	Ħ		D	#	
Chloromethane	ND	330	Ħ	#	n	11		**	
2-Chlorotoluene	ND	66.1	n	41	11	п	11	H	
4-Chlorotoluene	ND	66.1	**	,,		**	ıı	11	
1,2-Dibromo-3-chloropropane	ND	330	и	н	#		**		
Dibromochloromethane	ND	66.1	**	**		**	#		
1,2-Dibromoethane	ND	66.1		11	11	t†	n		
Dibromomethane	ND	66.1	Ħ	n	*	n	н	11	
1.2-Dichlorobenzene	ND	66.1	Ħ	я	Ħ	н	ļi.	11	
1,3-Dichlorobenzene	ND	66.1	н		н	"	"	п	
1.4-Dichlorobenzene	ND	66.1		u	**	"	н	**	
Dichlorodifluoromethane	ND	330	u	11	17	н	*	*	
1.1-Dichloroethane	ND	66.1	11		11	n	n	н	
1.2-Dichloroethane	ND	66.1	tt	11		"	"	11	
1.1-Dichloroethene	ND	66.1	n	Ħ	**	Ħ	**	н	
cis-1,2-Dichloroethene	ND	66.1	н	71	н	"	n	u	
trans-1,2-Dichloroethene	ND	66.1	H	**	*	n	*	•	
1,2-Dichloropropane	ND	66.1	т.		Ħ	Ħ	*	**	
1,3-Dichloropropane	ND	66.1	**	n	"	#	**	n	
2,2-Dichloropropane	ND	66.1	11	**	"	**		H	
1.1-Dichloropropene	ND	66.1	н	*	n	и	"	**	
cis-1,3-Dichloropropene	ND	66.1	"	11	**	"	u	**	
trans-1,3-Dichloropropene	ND	66.1	n	*	#	**	#	**	
Ethylbenzene	ND	66.1	n	**	*	9	*	Pr ·	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter Amended Report Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U03SL (P1G0205-01) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Hexachlorobutadiene	ND	132	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
2-Hexanone	ND	661	11	**	•	n	н	n	
Isopropylbenzene	ND	132	*	11	•	•	"	**	
p-Isopropyltoluene	ND	132	#	и		**	н		
4-Methyl-2-pentanone	ND	330	Ħ	*	**	**		**	
Methyl tert-butyl ether	ND	66.1	11	11	н	n	н	19	
Methylene chloride	ND	330	11	**	п	Ħ	#	n	
Naphthalene	ND	132	н	n	n	¥	**		
n-Propylbenzene	ND	66.1	n	**	n	n	#1	**	
Styrene	ND	66.1	*1	Ħ	н	**	n		
1.1,1.2-Tetrachloroethane	ND	66.1	11	п	**	**	u	11	
1,1.2.2-Tetrachloroethane	ND	66.1	q	n	**	**	**	**	
Tetrachloroethene	ND	66.1	н	11	н	W	**	"	
Toluene	ND	66.1		4	*	•		ir.	
1.2,3-Trichlorobenzene	ND	66.1	**	**	H		11	**	
1,2,4-Trichlorobenzene	ND	66.1	Ħ	41	"	*		*	
1,1,1-Trichloroethane	NĎ	66.1		71	II.	н	n	**	
1.1,2-Trichloroethane	ND	66.1	#1	я	**	n	ii	11	
Trichloroethene	ND	66.1	11	n .	11	**	Ħ	н	
Trichlorofluoromethane	ND	66.1	11	0	н		*	71	
1.2,3-Trichloropropane	ND	66.1	11	lt .	Ħ	11	n	er ·	
1,2,4-Trimethylbenzene	ND	66.1	**	"		•	11	11	
1,3,5-Trimethylbenzene	ND	66.1	,,	vr	11	"	n	10	
Vinyl chloride	ND	66.1	n	**	11	11	Ħ	н	
o-Xylene	ND	66.1	11	н	n	11	**	11	
m,p-Xylene	ND	132	11	n	n n	H	н	**	
Surr: 4-BFB	92.4 %	70-130							
Surr: 1,2-DCA-d4	92.9 %	70-130							
Surr: Dibromofluoromethane	96.5 %	70-130							
Surr: Toluene-d8	105 %	70-130							

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

# Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U04SL (P1G0205-02) Soil		- "			Sampled: 07/0	3/01 Recei	ived: 07/06/	 01	
Acetone	ND	1870	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
Benzene	ND	74.8	u	n	н	н	•	п	
Bromobenzene	ND	74.8	#	11	•	#	и	#	
Bromochloromethane	ND	74.8	#	11	11	n	9	er	
Bromodichloromethane	ND	74.8	W	**	п	n	*	**	
Bromoform	ND	74.8	**	n		n	11		
Bromomethane	ND	374	11	11	n	11	n.	н	
2-Butanone	ND	748	"	**	Ħ		71	**	
n-Butylbenzene	NĐ	374	n	**	77	*	n	<b>*</b>	
sec-Butylbenzene	ND	74.8	n	11	**	n	11		
tert-Butylbenzene	ND	74.8	n	Ħ	e	"	н		
Carbon disulfide	ND	748	n	Ħ	**	tt	n	11	
Carbon tetrachloride	ND	74.8	n	н	Ħ	**	H.	11	
Chlorobenzene	ND	74.8		н		7	*	Ħ	
Chloroethane	ND	74.8	**	**	n	n	17	<b>n</b>	
Chloroform	ND	74.8		11		*	11	n	
Chloromethane	ND	374	11	н	**	n	*1	n	
2-Chlorotoluene	ND	74.8	It	h	n	n	н	u	
4-Chlorotoluene	ND	74.8	11	н	n	11	н	11	
1,2-Dibromo-3-chloropropane	ND	374	11	**	**	"	**	11	
Dibromochloromethane	ND	74.8	#	11	н	#	*	н	
1,2-Dibromoethane	ND	74.8	er		11		**	н	
Dibromomethane	ND	74.8	"	*	n	11	Ħ	**	
1,2-Dichlorobenzene	ND	74.8	н	n	#	**	n	H.	
1.3-Dichlorobenzene	ND	74.8	**	H	n	11	п	**	
1,4-Dichlorobenzene	ND	74.8	"		#		71	н	
Dichlorodifluoromethane	ND	374	**	11	**	**	Ħ	n	
1.1-Dichloroethane	ND	74.8	*	н	н		p		
1.2-Dichloroethane	ND	74.8	Ü	*1	er .			н	
1,1-Dichloroethene	ND	74.8	11		11		н	"	
cis-1,2-Dichloroethene	ND	74.8	**	**	n	ii	ч	•	
trans-1,2-Dichloroethene	ND	74.8	n	n	Ħ	п	#	*	
1,2-Dichloropropane	ND	74.8	n	11	,	**	**	**	
1,3-Dichloropropane	ND	74.8	•	n	**	n	**	**	
2,2-Dichloropropane	ND	74.8	11	11	je	11	Ħ	n	
1.1-Dichloropropene	ND	74.8	n	**	**	Ħ	u.	Ħ	
cis-1,3-Dichloropropene	ND	74.8	п	**	n	11	**	и	
trans-1,3-Dichloropropene	ND	74.8	n	n	*	п	н	*	
Ethylbenzene	ND	74.8	п	n		Ħ	tr	•	

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA

North Creek Analytical, Inc. **Environmental Laboratory Network**  Page 15 of 47



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U04SL (P1G0205-02) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/0	n1	
Hexachlorobutadiene	ND	150	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01		
2-Hexanone	ND	748		,	# #	07/14/01	U//15/UI "	1071265	
Isopropylbenzene	ND	150	**	n	PF	•	 #	"	
p-lsopropyltoluene	NĐ	150	,,		**	*			
4-Methyl-2-pentanone	ND	374	**	•	Ħ	*	#		
Methyl tert-butyl ether	ND	74.8	Ħ	e	**	н	#	,	
Methylene chloride	ND	374	n	н	"	*	n	,,	
Naphthalene	ND	150	16	h	н	at .			
n-Propylbenzene	ND	74.8	77	11		 N	n		
Styrene	ND	74.8	H	n	a	 H	"	,	
1,1,1,2-Tetrachloroethane	ND	74.8	11	n	"	 II	"	r,	
1.1,2,2-Tetrachloroethane	ND	74.8	11	19		"	"	n	
Tetrachloroethene	ND	74.8	**	17		,,	7	"	
Toluene	ND	74.8	Ħ	**	"		··		
1,2,3-Trichlorobenzene	ND	74.8	*		11	,,	"		
1,2,4-Trichlorobenzene	ND	74.8	ш	n	**	11	11		
1,1,1-Trichloroethane	ND	74.8		a.	**	,	"		
1,1,2-Trichloroethane	ND	74.8	н	N	,,	n	**		
Trichloroethene	ND	74.8	n		11			-	
Trichlorofluoromethane	ND	74.8	,,	<b>n</b>			"	" "	
1,2,3-Trichloropropane	ND	74.8	u u		"	"	" R	"	
1,2,4-Trimethylbenzene	ND	74.8	tr .	41		"	" "	"	
1,3,5-Trimethylbenzene	ND	74.8	п	u	n	,,	•		
Vinyl chloride	ND	74.8	*1	**	*	Ħ	n	,,	
o-Xylene	ND	74.8	н	77		**	74	17	
m,p-Xylene	ND	150	n	n	"	11	11	•	
Surr: 4-BFB	92.3 %	70-130							
Surr: 1,2-DCA-d4	95.1 %	70-130							
Surr: Dibromofluoromethane	96.7 %	70-130							
Surr: Toluene-d8	107 %	70-130							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U05SL (P1G0205-03) Soil					Sampled: 07/0	3/01 Recei	ved: 07/06/0	01	
Acetone	ND	1590	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
Benzene	ND	63.6	"	n	н	"	11 13/01	10/1203	
Bromobenzene	ND	63.6	#	н	н	11	Ħ		
Bromochloromethane	ND	63.6	**	н	Ħ	11	11		
Bromodichloromethane	ND	63.6	н	n	Ħ	u u	II;	"	
Bromoform	ND	63.6	н	н	**	*1	Ħ	 H	
Bromomethane	ND	318	*	"	**		#	н	
2-Butanone	ND	636	•	11	tr ·	17	Ħ	**	
n-Butylbenzene	ND	318	•	, <b>n</b>	n	,,	,,	*	
sec-Butylbenzene	ND	63.6		11	Ħ	п	11	н	
tert-Butylbenzene	ND	63.6	11	н	н	ıı	Ħ	н	
Carbon disulfide	ND	636	"	11	,	11	11		
Carbon tetrachloride	ND	63.6	11	n	B		н	 D	
Chlorobenzene	ND	63.6	Ħ	11	77		 **		
Chloroethane	ND	63.6	¥r .		,,	_		"	
Chloroform	ND	63.6		 H	"	,	<b>71</b>	H	
Chloromethane	ND	318	,,			"		•	
2-Chlorotoluene	ND	63.6	H	"	"	" P	11		
4-Chiorotoluene	ND	63.6	#	11		"	11	n n	
1,2-Dibromo-3-chloropropane	ND	318	11		,,	"			
Dibromochloromethane	ND		"	"	m	" "	11	n	
1.2-Dibromoethane	ND	63.6	 N	" "	" "			"	
Dibromomethane		63.6				n	"	ч	
1,2-Dichlorobenzene	ND	63.6	*1	ч	"	"	**	Ħ	
1,3-Dichlorobenzene	ND	63.6	TT .	п	11	r	**	11	
1,4-Dichlorobenzene	ND	63.6	V	11	**	11	11	**	
Dichlorodifluoromethane	ND	63.6	"	H R	N	"	li .	**	
1,1-Dichloroethane	ND	318	#	"	"	**	11	11	
1,2-Dichloroethane	ND	63.6	"	"	**	-		"	
1,1-Dichloroethene	ND ND	63.6 63.6	"	"			-		
cis-1,2-Dichloroethene	ND ND	63.6	n	"	**		<b>"</b>	er .	
trans-1,2-Dichloroethene	ND ND	63.6	#	,,	,, H	"	"	,	
1,2-Dichloropropane	ND ND	63.6	H			" H	" "	,,	
1,3-Dichloropropane	ND ND			,,	"	"	"	,,	
2.2-Dichloropropane		63.6	"	"	,,	" "		"	
1,1-Dichloropropene	ND ND	63.6	"	"	п	"	"		
cis-1,3-Dichloropropene	ND ND	63.6	n		**		"	"	
trans-1,3-Dichloropropene		63.6	" "	и	# U	*			
Ethylbenzene	ND ND	63.6 63.6	n	"	"	*	"	#	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter Amended Report Issued: 07/30/01 16:44

### **Volatile Organic Compounds per EPA Method 8260B**

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA19U05SL (P1G0205-03) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	 01	
Hexachlorobutadiene	ND	127	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
2-Hexanone	ND	636	*	n	H.	H	"	7	
lsopropylbenzene	ND	127	"	'n	71	*	n	er e	
p-Isopropyltoluene	ND	127	**	**	Ħ	**	*	*1	
4-Methyl-2-pentanone	ND	318	"		n	n	*	ч	
Methyl tert-butyl ether	ND	63.6		*	19	w.	*	п	
Methylene chloride	ND	318	*	Ħ	n	R	**		
Naphthalene	ND	127	**	н	e e	11	Ħ	n	
n-Propylbenzene	ND	63.6	11	**	n	<b>81</b>	н	**	
Styrene	ND	63.6	tt	H	19	n	,,	n	
1.1,1,2-Tetrachloroethane	ND	63.6		н	**	Ħ	n		
1,1,2,2-Tetrachloroethane	ND	63.6	n	4	н	11	Ħ	•	
Tetrachloroethene	ND	63.6	**	"	n	н	*	,	
Toluene	88.9	63.6	**	II*	H	н	н	n	
1,2,3-Trichlorobenzene	ND	63.6	n	u	*	H	н	•	
1,2,4-Trichlorobenzene	ND	63.6	H		H	•	Ħ		
1,1,1-Trichloroethane	ND	63.6	Ħ	n	11	**	*	4	
1.1.2-Trichloroethane	ND	63.6	n	U	••	*	•	n	
Trichloroethene	ND	63.6	Ħ	**	**	II.	Ħ	**	
Trichlorofluoromethane	ND	63.6	"	n	н	**	11		
1,2,3-Trichloropropane	ND	63.6	"	н	Ħ	11	**	**	
1,2,4-Trimethylbenzene	ND	63.6	11	Ü	Ħ	•	**	Ħ	
1,3,5-Trimethylbenzene	ND	63.6	π	**	17		H	"	
Vinyl chloride	ND	63.6	"	и	н	*	11	*	
o-Xylene	ND	63.6	#	11	н	"	n	*	
m,p-Xylene	ND	127	#		**			n	
Surr: 4-BFB	91.0 %	70-130		_ · ·					
Surr: 1,2-DCA-d4	98.1 %	70-130							
Surr: Dibromofluoromethane	96.1 %	70-130							
Surr: Toluene-d8	106 %	70-130							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

# Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U06SL (P1G0205-04) Soil	· · · · · · · · · · · · · · · · · · ·				Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Acetone	ND	1880	ug/kg dry	I	EPA 8260B	07/14/01	07/15/01	1071265	
Benzene	ND	75.3	**	"	11	it	н	11	
Bromobenzene	ND	75.3	**	*	11	11	u	"	
Bromochloromethane	ND	75.3		11	π	n	n	11	
Bromodichloromethane	ND	75.3	"	Ħ	•	#	n	11	
Bromoform	ND	75.3	н	n	Ħ	n		n	
Bromomethane	ND	376	н	n	н	Ħ	u	*	
2-Butanone	ND	753		W.	n	"	11		
n-Butylbenzene	ND	376	**	**	я	11		**	
sec-Butylbenzene	ND	75.3	11	n	q	ti	•	m m	
tert-Butylbenzene	ND	75.3	n	#	71	11	n	11	
Carbon disulfide	ND	753	Ħ	*	n	Ħ	n	11	
Carbon tetrachloride	ND	75.3	11	н	**	и	ır	n	
Chlorobenzene	ND	75.3	11	**			11	*	
Chloroethane	ND	75.3	"	"	**	11	11		
Chloroform	ND	75.3	Ħ	н	и	II.	"	H	
Chloromethane	ND	376			н	Ħ	11	n	
2-Chlorotoluene	ND	75.3	**	"	n	"	71	11	
4-Chlorotoluene	ND	75.3	11	11		**	Ħ	11	
1,2-Dibromo-3-chloropropane	ND	376	н	**	11	n	n	**	
Dibromochloromethane	ND	75.3	Ħ	**	n		n	,	
1.2-Dibromoethane	ND	75.3	Ħ		Ħ	11	H.	n	
Dibromomethane	ND	75.3	"	н	н	n	**	•	
1,2-Dichlorobenzene	ND	75.3	11	*	**	"	н	n	
1,3-Dichlorobenzene	ND	75.3	n		11	"	**	11	
1.4-Dichlorobenzene	ND	75.3	**	11	*	n	Ħ	ŋ	
Dichlorodifluoromethane	ND	376	11		**	n	"	п	
1,1-Dichloroethane	ND	75.3	п	11	11	11	11	n	
1,2-Dichloroethane	ND	75.3		tr.	"	"	11	<b>31</b>	
1,1-Dichloroethene	ND	75.3		Ħ	н	н	11	n	
cis-1.2-Dichloroethene	ND	75.3	ıt	H	Ħ	n	n	ч	
trans-1,2-Dichloroethene	ND	75.3	**	n	**	n	*		
1,2-Dichloropropane	ND	75.3	11	11		н	n	Ħ	
1,3-Dichloropropane	ND	75.3	n	11	n	Ħ	11	#1	
2,2-Dichloropropane	ND	75.3	n	**	11	n	11	Ħ	
1,1-Dichloropropene	ND	75.3	**	**	н	н	**	*	
cis-1,3-Dichloropropene	ND	75.3	Ħ	п	н	"	н	H	
trans-1,3-Dichloropropene	ND	75.3	-	n	н	•	и	6	
Ethylbenzene	ND	75.3		п	п	**	**	**	

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilutio <b>n</b>	Method	Prepared	Analyzed	Batch	Note
01AMA19U06SL (P1G0205-04) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
Hexachlorobutadiene	ND	151	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
2-Hexanone	ND	753	"	π	"	07/1 <del>4</del> /01	07/13/01	10/1203	
Isopropylbenzene	ND	151	,,	н	**	**	11		
p-Isopropyltoluene	ND	151	**	n	n	11	ti	,	
4-Methyl-2-pentanone	ND	376	11	44	n	"	11		
Methyl tert-butyl ether	ND	75.3	n		n	**	n	,	
Methylene chloride	ND	376	и	Ħ	**	0	n	11	
Naphthalene	ND	151	10	11	*	71		u	
n-Propylbenzene	ND	75.3	. 17	11	11	n	,	*	
Styrene	ND	75.3	**	11	**	"	"		
1.1,1,2-Tetrachloroethane	ND	75.3		ч	R	11	11		
1,1,2,2-Tetrachloroethane	ND	75.3		er .	it .	**	11		
Tetrachloroethene	ND	75.3	*	**	ч	11			
Toluene	ND	75.3	Ħ	<b>n</b>	**	**	*	11	
1,2,3-Trichlorobenzene	ND	75.3	11	п	Ħ	•		п	
1,2,4-Trichlorobenzene	ND	75.3	Ħ	n	н		"	#1	
1.1.1-Trichloroethane	ND	75.3	*1	п	#1	,,	H		
1,1,2-Trichloroethane	ND	75.3	n	n	н	"	н	11	
Trichloroethene	ND	75.3	#	n	n	"	**	#	
Trichlorofluoromethane	ND	75.3	H	h	**	•	Ħ	11	
1,2,3-Trichloropropane	ND	75.3	n	н	71	п	Ħ	н	
1,2,4-Trimethylbenzene	ND	75.3	ır	11	P	H	n	<b>n</b>	
1,3,5-Trimethylbenzene	ND	75.3	**	11	**	**	**	h	
Vinyl chloride	ND	75.3	ut .	11	"	n	n	,,	
o-Xylene	ND	75.3	•	ч	**	**	er	**	
m,p-Xylene	ND	151	•	71	"	41	Ħ	**	
Surr: 4-BFB	92.2 %	70-130							
Surr: 1,2-DCA-d4	96.6 %	70-130							
Surr: Dibromofluoromethane	96.1 %	70-130							
Surr: Toluene-d8	108 %	70-130							

North Creek Analytical - Portland

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Project: Amehitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U07SL (P1G0205-05) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/(	)1	
Acetone	ND	1590	ug/kg dry	i	EPA 8260B	07/14/01	07/15/01	1071265	
Benzene	ND	63.8	11	n	Ħ	n	н	*	
Bromobenzene	ND	63.8	н	II.	w	n	н	н	
Bromochloromethane	ND	63.8	ti	**	11	#	11	п	
Bromodichloromethane	ND	63.8	n	u	11	н	m		
Bromoform	ND	63.8	Ħ	*		"	,	п	
Bromomethane	ND	319	"	n	**	n	#	Ħ	
2-Butanone	ND	638	H	n	<b>#</b>	н	p	n	
n-Butylbenzene	ND	319	#	π	п	n	11	п	
sec-Butylbenzene	ND	63.8	Ħ	11	н	*	#	"	
tert-Butylbenzene	ND	63.8	#	•	. 11	11	**	**	
Carbon disulfide	ND	638	H	,,	n	н	н	<b>#</b>	
Carbon tetrachloride	ND	63.8	Ħ	*1	11	Ħ	11	n	
Chlorobenzene	ND	63.8	n	11	it.	r	н	11	
Chloroethane	ND	63.8		n	,,	ti	9	**	
Chloroform	ND	63.8	**	ıı	,,	W.	u	11	
Chloromethane	ND	319	11	71	"	**	*	47	
2-Chlorotoluene	ND	63.8	11	и	lt	H	**	n	
4-Chlorotoluene	ND	63.8	11	17	77	н		H	
1,2-Dibromo-3-chloropropane	ND	319		**	Ħ		**	11	
Dibromochloromethane	ND	63.8	11	**		,,	it .	"	
1,2-Dibromoethane	ND	63.8	**		11	"	п	17	
Dibromomethane	ND	63.8	**	"	19	n	п	m .	
1.2-Dichlorobenzene	ND	63.8	**	**	n	11	π	"	
1.3-Dichlorobenzene	ND	63.8	17	Я	,	п	7	11	
1,4-Dichlorobenzene	ND	63.8	ŧ	**	R	н		H	
Dichlorodifluoromethane	ND	319	**	Ħ	Ħ	11	n	**	
1.1-Dichloroethane	ND	63.8	**	H.	н		#	n	
1.2-Dichloroethane	ND	63.8	**	"	11		**	н	
1,1-Dichloroethene	ND	63.8	**	"	"	Ħ	**	u	
cis-1.2-Dichloroethene	ND	63.8	n	**	**	11	Ħ	W	
trans-1.2-Dichloroethene	ND	63.8	#	Ħ	н	п		**	
1,2-Dichloropropane	ND	63.8	**		н	π	11	**	
1,3-Dichloropropane	ND	63.8	II .	#		l7	•	11	
2.2-Dichloropropane	ND	63.8	11	n	n	11	**	17	
1,1-Dichloropropene	ND	63.8	ıı	**	n	11	н	**	
cis-1,3-Dichloropropene	ND	63.8	11	n	H	**	Ħ	H	
trans-1,3-Dichloropropene	ND	63.8	Ħ	Ħ	,,	n	Ħ	•	
Ethylbenzene	ND	63.8	п	**	n	Ħ	n	ŗ,	

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Annie Krarawetter

Amended Report Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U07SL (P1G0205-05) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/0		
Hexachlorobutadiene	ND	128	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
2-Hexanone	ND	638	- <u></u>	n	E171 0200D	07/14/01	U//13/U1 "	10/1265	
Isopropylbenzene	ND	128	н	w	*	11		<b>17</b>	
p-Isopropyltoluene	ND	128	п	n	e	4	#		
4-Methyl-2-pentanone	ND	319	11	н	n				
Methyl tert-butyl ether	ND	63.8	Ħ		Ħ	*	,		
Methylene chloride	ND	319	4	**	n	,	11	,,	
Naphthalene	ND	128	**	4	**	"			
n-Propylbenzene	ND	63.8	Ħ	*	**	,,	lt .		
Styrene	ND	63.8	#	**	lt.	,,	н		
1,1,1,2-Tetrachloroethane	ND	63.8	н	*	**	,,	,,		
1,1,2,2-Tetrachloroethane	ND	63.8	Ħ	н	11	ıı	,,		
Tetrachloroethene	ND	63.8	11	•	41	"		H	
Toluene	88.8	63.8	n	Ħ	er .		**	<b>*</b>	
1,2,3-Trichlorobenzene	ND	63.8	**	11	**	п	*		
1,2,4-Trichlorobenzene	ND	63.8	**	n	#	n		н	
1,1,1-Trichloroethane	ND	63.8	н	n		Ħ	n	**	
1,1,2-Trichloroethane	ND	63.8	Ħ	н	er e	'n	11	•	
Trichloroethene	ND	63.8	#	n	**	*	ar .	n	
Trichlorofluoromethane	ND	63.8	н			ri .	u	n	
1,2,3-Trichloropropane	ND	63.8	н	71	**	н	11	н	
1,2,4-Trimethylbenzene	ND	63.8	"	и	11		п		
1,3,5-Trimethylbenzene	ND	63.8	**			11	н	**	
Vinyl chloride	ND	63.8	"	**		11	H	n	
o-Xylene	ND	63.8	"	9	п	er		**	
m,p-Xylene	ND	128	**	"	#	77	n	n	
Surr: 4-BFB	90.8 %	70-130							
Surr: 1,2-DCA-d4	98.0 %	70-130							
Surr: Dibromofluoromethane	97.4 %	70-130							
Surr: Toluene-d8	106 %	70-130							

North Creek Analytical - Portland

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amehitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U08SL (P1G0205-06) Soil					Sampled: 07/0		ved: 07/06/		INOLES
Acetone	ND	2230	ug/kg dry	1	EPA 8260B	·			
Benzene	ND	89.1	ug/kg uiy	1	EPA 8200B	07/14/01 "	07/15/01	1071265	
Bromobenzene	ND	89.1	,,	u		,,	и н		
Bromochloromethane	ND	89.1		**	11	"	"	и	
Bromodichloromethane	ND	89.1	"		 N	" "	"		
Bromoform	ND	89.1	11		" "	"	"	n	
Bromomethane	ND ND	445	11	"	,,		#	Ħ	
2-Butanone	ND ND	891		"	,,	_	11	H	
n-Butylbenzene	ND	445	n						
sec-Butylbenzene	ND ND	89.1		"	,,	,	"	<b>4</b>	
tert-Butylbenzene	ND ND	89.1 89.1	#	"		"	,,	71 er	
Carbon disulfide	ND ND	89.1 891		"	"	"	"		
Carbon tetrachloride	ND ND	89.1	" II	" #	,	,,	и		
Chlorobenzene	ND		11		"	"		"	
Chloroethane		89.1		-			n	н	
Chloroform	ND	89.1	"	•	n	11	n	H	
Chloromethane	ND	89.1	n	"	**	11	m .	"	
2-Chlorotoluene	ND	445	11	"	**		"	11	
4-Chlorotoluene	ND	89.1	11	11	9	Ħ	n	l)	
1,2-Dibromo-3-chloropropane	ND	89.1		"	<b>+1</b>	Ħ	**	**	
Dibromochloromethane	ND	445	н	"	97	Ħ	#	**	
1.2-Dibromoethane	ND	89.1	71	"		*	17	Ħ	
Dibromomethane	ND	89.1			**	п	n	17	
1,2-Dichlorobenzene	ND	89.1	"	**	**	H	91	**	
	ND	89.1	11	#	41	"	0	**	
1,3-Dichlorobenzene	ND	89.1	11	#	11	11	"	п	
1,4-Dichlorobenzene	ND	89.1	19	*	**	"	**	n	
Dichlorodifluoromethane	ND	445	"	n	W	11	**	II	
1,1-Dichloroethane	ND	89.1		н	4	n	11	ų.	
1.2-Dichloroethane	ND	89.1			•	. "	71	#	
1,1-Dichloroethene	ND	89.1		er	**	**	Ħ	**	
cis-1,2-Dichloroethene	ND	89.1	H ,	**	. "		**	*	
trans-1,2-Dichloroethene 1,2-Dichloropropane	ND	89.1	" "	11	#	11	n n		
1,3-Dichloropropane	ND ND	89.1	,	"	"	"	11	"	
2,2-Dichloropropane		89.1	,	"	"	"	**	"	
1,1-Dichloropropene	ND	89.1	"	**	"				
cis-1,3-Dichloropropene	ND	89.1	"				"		
	ND	89.1		<b>7</b>		ti	н	"	
trans-1,3-Dichloropropene	ND	89.1		IT	"	п	(1	n	
Ethylbenzene	ND	89.1	**	н	"	n	n	Ħ	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U08SL (P1G0205-06) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Hexachlorobutadiene	ND	178	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
2-Hexanone	ND	891	"		11	11	11	1071203 H	
Isopropylbenzene	ND	178	Ħ	"	n	11	*	**	
p-Isopropyltoluene	ND	178	*		-	H	Ħ	n	
4-Methyl-2-pentanone	ND	445		n	n	77	,	Ħ	
Methyl tert-butyl ether	ND	89.1	0		**	*	n	Ħ	
Methylene chloride	ND	445	n	"		n	н	н	
Naphthalene	ND	178	11	n	н	17	n	**	
n-Propylbenzene	ND	89.1	**	m	n	Ħ		N	
Styrene	ND	89.1	**	,	"	**	n	11	
1,1,1,2-Tetrachloroethane	ND	89.1	11	<b>H</b>		**	n.	н	
1,1,2,2-Tetrachloroethane	ND	89.1	н	"	11		H	н	
Tetrachloroethene	ND	89.1	ri	11		11	0	н	
Toluene	ND	89.1	Ħ	n	n	n	n	n	
1,2,3-Trichlorobenzene	ND	89.1	*	11	Ħ	**		н	
1,2,4-Trichlorobenzene	ND	89.1			Ħ	н	**	tt	
1,1,1-Trichloroethane	ND	89.1		н	Ħ	н	н	Ħ	
1,1.2-Trichloroethane	ND	89.1	11	**	,	н	н	*	
Trichloroethene	ND	89.1	11	Ħ	"	Ħ	Ħ	*1	
Trichlorofluoromethane	ND	89.1	11	n	11	*	17	17	
1,2,3-Trichloropropane	ND	89.1	11	*	15		n		
1,2,4-Trimethylbenzene	ND	89.1	**		н	**	11	n	
1,3,5-Trimethylbenzene	ND	89.1	н	et	n	77	н	"	
Vinyl chloride	ND	89.1	n		н	**	**	H	
o-Xylene	ND	89.1	11	n	"	"	ır	"	
m,p-Xylene	ND	178	n	11	н		•	*	
Surr: 4-BFB	94.4 %	70-130							
Surr: 1,2-DCA-d4	95.8 %	70-130							
Surr: Dibromofluoromethane	97.7%	70-130							
Surr: Toluene-d8	107 %	70-130							

North Creek Analytical - Portland

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Annie Krarawetter

Amended Report Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U09SL (P1G0205-07) Soil					Sampled: 07/0	3/01 Recei	ved: 07/06/0	 01	
Acetone	ND	1760	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
Benzene	ND	70.4	H	- n	H 0200B	07/1 <b>7/</b> 01	07/13/01 M	10/1203	
Bromobenzene	ND	70.4	Ħ	44	n		,	"	
Bromochloromethane	ND	70.4	Ħ	**		,	77		
Bromodichloromethane	ND	70.4	17	*	**	71		"	
Bromoform	ND	70.4	11	**	"		*		
Bromomethane	ND	352	11		11			,	
2-Butanone	ND	704	н	77	11		,,		
n-Butylbenzene	ND	352	u	11	,		"	_	
sec-Butylbenzene	ND ND	70.4	**		"		n	*	
tert-Butylbenzene	ND	70.4	**	ır		" "		-	
Carbon disulfide	ND ND	70.4		· ·		"	1°	"	
Carbon tetrachloride	ND ND	704	"	"	"	n n	"	11	
Chlorobenzene	ND ND		н	"	,	"			
Chloroethane	ND ND	70.4	ч	"		**	"	11	
Chloroform	ND ND	70.4	 N	"	*	"	"	#	
Chloromethane		70.4	" #	"			"	"	
2-Chlorotoluene	ND	352		"		"		11	
4-Chlorotoluene	ND	70.4	,,	"	87	**	*1	н	
1.2-Dibromo-3-chloropropane	ND	70.4			19	*	Ħ	11	
Dibromochloromethane	ND	352	Ħ	H	4	*	Ħ	11	
1,2-Dibromoethane	ND	70.4	11	11	n	*	•	"	
	ND	70.4	11	17	11		n	n	
Dibromomethane	ND	70.4	"	"	"	Ħ		#	
1,2-Dichlorobenzene	ND	70.4	lt .	n	"	11	11	*	
1.3-Dichlorobenzene	ND	70.4	17	11	"	**	H	**	
1,4-Dichlorobenzene Dichlorodifluoromethane	ND	70.4	**	**	"	·	11	•	
1.1-Dichloroethane	ND	352	11	"	"	n	11	n	
	ND	70.4	11	11	"	11	17	"	
1.2-Dichloroethane	ND	70.4	и	11	п		ŧ	II.	
1.1-Dichloroethene	ND	70.4	n	н	п	11	Ħ	"	
cis-1,2-Dichloroethene	ND	70.4		11	п	*	н	"	
trans-1,2-Dichloroethene	ND	70.4	n	'n	u+	н	Ħ	Ħ	
1,2-Dichloropropane	ND	70.4	#		*	Ħ	n	u	
1,3-Dichloropropane	ND	70.4	,	Ħ	n	Ħ	Ħ	H	
2.2-Dichloropropane	ND	70.4			"	#	#	H .	
1,1-Dichloropropene cis-1,3-Dichloropropene	ND	70.4			11	M	**	H	
	ND	70.4		*	**	Ħ	**	Ħ	
trans-1,3-Dichloropropene	ND	70.4	n		II.	**	n	*	
Ethylbenzene	ND	70.4	11	n	17	,,	**	Ħ	

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2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Volatile Organic Compounds per EPA Method 8260B

#### North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U09SL (P1G0205-07) Soil				(	Sampled: 07/0	3/01 Rece	ived: 07/06/0	01	
Hexachlorobutadiene	ND	141	ug/kg dry	1	EPA 8260B	07/14/01	07/15/01	1071265	
2-Hexanone	ND	704	*	•	п		Ħ	n .	
Isopropylbenzene	ND	141	Ħ	n	**	n		*	
p-Isopropyltoluene	ND	141	н	tr	n	Ħ	**	•	
4-Methyl-2-pentanone	ND	352	m	н	r	11	11		
Methyl tert-butyl ether	ND	70.4	11	**	**	19	n	**	
Methylene chloride	ND	352	n	11	n	n	*1	u	
Naphthalene	ND	141	*	*1	п		**	н	
n-Propylbenzene	ND	70.4	n	R		**	*		
Styrene	ND	70.4	11	"	π	II.	**	Ħ	
1,1,1,2-Tetrachloroethane	ND	70.4	н	11	n	H	**	*	
1,1,2,2-Tetrachloroethane	ND	70.4	н	н	Ħ	n	н	,,	
Tetrachloroethene	ND	70.4	u	H	n n	**	ч	**	
Toluene	ND	70.4	*	Ħ	u	··	n	•	
1,2,3-Trichlorobenzene	ND	70.4	17	n	4	n	74	ŧ	
1,2,4-Trichlorobenzene	ND	70.4	n	"	n	10	**	н	
1,1,1-Trichloroethane	ND	70.4	H	H	Ħ	н	11		
1,1.2-Trichloroethane	ND	70.4	n	**	•	u	n	*	
Trichloroethene	ND	70.4	**	"	п	n	u	n	
Trichlorofluoromethane	ND	70.4	**		H	•	"	•	
1,2,3-Trichloropropane	ND	70.4	11	Ħ	11	11	*	11	
1,2,4-Trimethylbenzene	ND	70.4	**	n	H	**	π	н	
1,3,5-Trimethylbenzene	ND	70.4	**	11	n	n	Ħ	н	
Vinyl chloride	ND	70.4	**	o	n	n	*	Ħ	
o-Xylene	ND	70.4	**		n		и		
m,p-Xylene	ND	141	n	11	Ħ	**	н	n	
Surr: 4-BFB	90.3 %	70-130							
Surr: 1,2-DCA-d4	96.6 %	70-130							
Surr: Dibromofluoromethane	97.1 %	70-130							
Surr: Toluene-d8	107 %	70-130							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

### Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U03SL (P1G0205-01) Soil					Sampled: 07/03	3/01 Recei	ived: 07/06/0	01	
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/16/01	1071164	
Acenaphthylene	ND	13.4	11	n	н	m	#	1071104	
Anthracene	ND	13.4	n		н	n	11	11	
Benzo (a) anthracene	ND	13.4	11	n	•	*	*	11	
Benzo (a) pyrene	ND	13.4	**	n	Ħ		**	IF	
Benzo (b) fluoranthene	ND	13.4		н	**				
Benzo (ghi) perylene	ND	13.4	11	н	ti		#	11	
Benzo (k) fluoranthene	ND	13.4	**	н	•	•	11	**	
Chrysene	ND	13.4	77	In	н	,,	m	11	
Dibenzo (a,h) anthracene	ND	13.4	**	н	n		**	•	
Fluoranthene	ND	13.4	#	N	н	н	,,		
Fluorene	ND	13.4		н	Ħ	11	H		
Indeno (1,2,3-cd) pyrene	ND	13.4	**		н	11	h		
Naphthalene	ND	13.4	11		н	"	n	*	
Phenanthrene	ND	13.4	11	n	н	11	n	H	
Pyrene	ND	13.4	11	**	н	"	11	n	
Surr: Fluorene-d10	83.2 %	40-150							
Surr: Pyrene-d10	129 %	40-150							
Surr: Benzo (a) pyrene-d12	87.9 %	40-150							
01 A M A 191104S1 (P1C0205_02) Soil					C1-1-07/0				

Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/16/01	1071164
Acenaphthylene	ND	13.4	"	11	LIA 6270III	07/12/01 #	#	10/1104
Anthracene	ND	13.4	н	ıı	п	n		**
Benzo (a) anthracene	ND	13.4	Ħ		11	"		
Benzo (a) pyrene	ND	13.4	*	*	п	11		**
Benzo (b) fluoranthene	ND	13.4	•		**	н	"	**
Benzo (ghi) perylene	ND	13.4	n,	71	u	и	11	77
Benzo (k) fluoranthene	ND	13.4	"	*	. "	и	rr .	Ħ
Chrysene	ND	13.4	**	n	u u		**	#
Dibenzo (a,h) anthracene	ND	13.4		н	*	H.	**	
Fluoranthene	ND	13.4	n	**	#	11	**	**
Fluorene	ND	13.4	H.	**	₩	•		
Indeno (1,2,3-cd) pyrene	ND	13.4		n	#	n		10
Naphthalene	ND	13.4	н	17	H	#	77	11
Phenanthrene	ND	13.4	п	**	Ħ	*	"	19
Pyrene	ND	13,4	n	**	n		**	n
Surr: Fluorene-d10	80.7 %	40-150						

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report issued: 07/30/01 16:44

#### Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U04SL (P1G0205-02) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Surr: Pyrene-d10	126 %	40-150	· · · · · · · · · · · · · · · · · · ·						
Surr: Benzo (a) pyrene-d12	96.3 %	40-150							
01AMA19U05SL (P1G0205-03) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Acenaphthene	ND	13.4	ug/kg dry		EPA 8270m	07/12/01	07/16/01	1071164	
Acenaphthylene	ND	13.4	"		# #	9	07/10/01 *	10/1104	
Anthracene	ND	13.4	"	11	•	*	n	а	
Benzo (a) anthracene	ND	13.4	"	н	n .		,,		
Benzo (a) pyrene	ND	13.4	11	n	Ħ	н .	11		
Benzo (b) fluoranthene	ND	13.4		11	#	•	11	7	
Benzo (ghi) perylene	ND	13.4	ti	h	11	. "	**	<b>4</b>	
Benzo (k) fluoranthene	ND	13.4	**	•	**	19	н	**	
Chrysene	ND	13.4	•	**	н	87	H	ur .	
Dibenzo (a,h) anthracene	ND	13.4	#	*	11	**	11	P	
Fluoranthene	ND	13.4	**	н	и	**	11	11	
Fluorene	ND	13.4	"	87	п		ıı	11	
Indeno (1,2,3-cd) pyrene	ND	13.4	**	"	п	11	<b>H</b>	•	
Naphthalene	ND	13.4			11	"	n	•	
Phenanthrene	ND	13.4	u u	н	н	**	*	"	
Pyrene	ND	13.4	н	n	*	**		11	
Surr: Fluorene-d10	75.2 %	40-150							
Surr: Pyrene-d10	130 %	40-150							
Surr: Benzo (a) pyrene-d12	86.3 %	40-150							
01AMA19U06SL (P1G0205-04) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Acenaphthene	ND	13.4	ug/kg dry		EPA 8270m	07/12/01	07/17/01	1071164	
Acenaphthylene	ND	13.4	"	н	H	11	# #	10/1104	
Anthracene	ND	13.4	#	**	n	n	**	n	
Benzo (a) anthracene	ND	13.4	**	**	n	н	п	n	
Benzo (a) pyrene	ND	13.4	"	11	•	Ħ	*	*1	
D (1) 0									

13.4 Dibenzo (a,h) anthracene ND 13.4 Fluoranthene ND 13.4 Fluorene ND 13.4 Indeno (1,2,3-cd) pyrene ND 13.4

ND

ND

ND

ND

13.4

13.4

13.4

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Benzo (b) fluoranthene

Benzo (k) fluoranthene

Benzo (ghi) perylene

Chrysene

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

# Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U06SL (P1G0205-04) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/		
Naphthalene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/17/01	1071164	
Phenanthrene	ND	13.4	יו פייי עם -	"	L171 8270111	7/12/01	0//1//01	10/1164	
Pyrene	ND	13.4	"	11	•	.,		**	
Surr: Fluorene-d10	84.9 %	40-150							
Surr: Pyrene-d10	122 %	40-150							
Surr: Benzo (a) pyrene-d12	94.6 %	40-150							
01AMA19U07SL (P1G0205-05) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	R-05
Acenaphthene	ND	26.8	ug/kg dry	2	EPA 8270m	07/12/01	07/16/01	1071164	
Acenaphthylene	ND	26.8	"	H	11	11	11	н	
Anthracene	ND	26.8	*		11	It		n	
Benzo (a) anthracene	ND	26.8	. н	11	u	11	н	**	
Benzo (a) pyrene	ND	26.8	n	n		u	#	11	
Benzo (b) fluoranthene	ND	26.8	н	"	**	Ħ	**	**	
Benzo (ghi) perylene	ND	26.8	Ħ	19	*	*	Ħ	**	
Benzo (k) fluoranthene	ND	26.8	п	tr	D	19			
Chrysene	ND	26.8	**	u	**	Ħ			
Dibenzo (a,h) anthracene	ND	26.8	**	и	u	71	**	"	
Fluoranthene	ND	26.8	**	*1	q	**		**	
Fluorene	ND	26.8	17	H	H	11	11	**	
Indeno (1,2,3-cd) pyrene	ND	26.8	11	I†	**	н	n	u	
Naphthalene	61.0	26.8	**	71	*	Ħ	<b>7</b>	**	
Phenanthrene	81.1	26.8	"	*	n	Ħ	n	#	
Pyrene	ND	26.8	11	n	*	H	"	*	
Surr: Fluorene-d10	84.8 %	40-150							
Surr: Pyrene-d10	129 %	40-150							
Surr: Benzo (a) pyrene-d12	93.2 %	40-150							

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Bristol Environmental & Engineering

2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

### Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U08SL (P1G0205-06) Soil				-	Sampled: 07/0	3/01 Rece	ived: 07/06/	701	
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/17/01	1071164	
Acenaphthylene	ND	13.4	"	ii	#	17/12/01	U//1//U]	10/1164	
Anthracene	ND	13.4	**	n	н	"	n	in .	
Benzo (a) anthracene	ND	13.4	**	и	n			н	
Benzo (a) pyrene	ND	13.4	н	"	n	,	77		
Benzo (b) fluoranthene	ND	13.4	**	u	n	11			
Benzo (ghi) perylene	ND	13.4	п	W.	п	11		 H	
Benzo (k) fluoranthene	ND	13.4	n		n			" #	
Chrysene	ND	13.4	*	m	n	,	,,	** **	
Dibenzo (a,h) anthracene	ND	13.4	Ħ	n	**		,,	"	
Fluoranthene	ND	13.4	ħ	77	**	"	,, 11	"	
Fluorene	ND	13.4	*	11	"	" H	"	"	
Indeno (1,2,3-cd) pyrene	ND	13.4	*	**	**	"	,,	"	
Naphthalene	ND	13.4	<b>7</b>	"	,,	"	" "	"	
Phenanthrene	ND	13.4	п	**	••	 !!	n	,,	
Pyrene	ND	13.4	71	n	ıı	"	n	"	
Surr: Fluorene-d10	79.2 %	40-150							
Surr: Pyrene-d10	123 %	40-150							
Surr: Benzo (a) pyrene-d12	90.4 %	40-150							
01AMA19U09SL (P1G0205-07) Soil					Sampled: 07/03	2/01 Dags		01	
Acenaphthene	ND	13.4	ug/kg dry			**************	ved: 07/06/		
Acenaphthylene	ND	13.4	ug/kg diy	1	EPA 8270m	07/12/01	07/17/01	1071164	
Anthracene	ND	13.4	**	и	11	,,	" #	u u	
Benzo (a) anthracene	ND	13.4	Ħ			,,	"	"	
Benzo (a) pyrene	ND	13.4	н		**	,		"	
Benzo (b) fluoranthene	ND	13.4	#	"	n				
Benzo (ghi) perylene	ND	13.4	n	"		19	11		
Benzo (k) fluoranthene	ND	13.4	n			**			
Chrysene	ND	13.4	77	ıı	n .	11	11	" "	
Dibenzo (a.h) anthracene	ND	13.4	71	R		11	**	"	
Fluoranthene	ND	13.4	**	н		"	,,	" #	
Fluorene	ND	13.4	**	**	н	Įį.	**	и	
Indeno (1,2,3-cd) pyrene	ND	13.4	n	17	n		,,	,,	
Naphthalene	ND	13.4	**	п	"	19			
Phenanthrene	ND	13.4	11	н	,,	11	"	 V	
Pyrene	ND	13.4	и	**	**		11	"	
Surr: Fluorene-d10	83.8 %	40-150	Committee of the control of the cont						

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

### Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U09SL (P1G0205-07) Soil				S	ampled: 07/0	03/01 Recei	ived: 07/06/0	<u>-</u> 11	
Surr: Pyrene-d10 Surr: Benzo (a) pyrene-d12	116 % 93.6 %	40-150 40-150							-

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Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

#### Percent Dry Weight (Solids) per Standard Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA19U03SL (P1G0205-01) Soil				Sampled: 07/03/	01 Rece	ived: 07/06/(	)1	
% Solids	77.9	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA19U04SL (P1G0205-02) Soil				Sampled: 07/03/	01 Rece	ived: 07/06/0	Ď1	
% Solids	82.0	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA19U05SL (P1G0205-03) Soil				Sampled: 07/03/	01 Rece	ived: 07/06/0	01	
% Solids	82.2	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA19U06SL (P1G0205-04) Soil		·		Sampled: 07/03/	01 Rece	ived: 07/06/0	01	
% Solids	84.0	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA19U07SL (P1G0205-05) Soil				Sampled: 07/03/	01 Rece	ived: 07/06/0	01	
% Solids	83.3	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA19U08SL (P1G0205-06) Soil				Sampled: 07/03/	'01 Rece	ived: 07/06/	01	
% Solids	83.2	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA19U09SL (P1G0205-07) Soil				Sampled: 07/03/	01 Rece	ived: 07/06/	01	
% Solids	80.3	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

# Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B - Quality Control

	Noi	rth Creek	Analy	tical - Po	ortland					141 ()1
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071099 - EPA 5035										
Blank (1071099-BLK1)				Prepared	& Analyze	d: 07/10/	<b>^</b>	<del></del>		
Gasoline Range Organics	ND	4.00	mg/kg	Toparea	de Anaiyze	u. 07/10/	<u> </u>			
Benzene	ND	0.100	11							
oluene	ND	0.100	n							
Ethylbenzene	ND	0.100	ıı							
Kylenes (total)	ND	0.100	*							
Surr: a.a,a-TFT (FID)	3.22		,,	2.50		129	60-140			
Surr: a.a.a-TFT (PID)	2.43		"	2.50		97.2	60-140			
LCS (1071099-BS1)				Prepared	& Analyze	A- 07/10/	31			
Gasoline Range Organics	68.6	4.00	mg/kg	62.5	& Allalyze	110	70-120			
Surr: a.a.a-TFT (FID)	3.41		ır	2.50	<del>-</del>	136	60-140	7		
CS (1071099-BS2)				Prepared	& Analyze	·d· 07/10/	31			
Benzene	0.795	0.100	mg/kg	1.00	cc / tildiy2x	79.5	70-120			
Toluene	0.777	0.100	"	1.00		77.7	70-120			
Ethylbenzene	0.803	0.100	n	1.00		80.3	70-120			
(ylenes (total)	2.51	0.100	n	3.00		83.7	70-120			
Surr: a.a.a-TFT (PID)	2.47		"	2.50		98.8	60-140			
CS Dup (1071099-BSD1)				Prepared	& Analyze	ed: 07/10/	31			
Gasoline Range Organics	68.6	4.00	mg/kg	62.5		110	70-120	0.00	20	
Surr: a,a,a-TFT (FID)	3.46		"	2.50		138	60-140			
CS Dup (1071099-BSD2)				Prepared	& Analyze	:d: 07/10/	01			
Benzene	0.819	0.100	mg/kg	1.00		81.9	70-120	2.97	200	
Toluene Toluene	0.799	0.100	"	1.00		79.9	70-120	2.79	200	
Ethylbenzene	0.835	0.100		1.00		83.5	70-120	3.91	200	
Xylenes (total)	2.60	0.100	u	3.00		86.7	70-120	3.52	200	

2.50

2.51

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60-140

100

Surr: a.a.a-TFT (PID)

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

# Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B - Quality Control

North Creek Analytical - Portland											
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch 1071099 - EPA 5035											
Duplicate (1071099-DUP1)	So	urce: P1G02	09-01	Prepared	& Analyza	ed: 07/10/0	01			· · · · · · · · · · · · · · · · · · ·	_
Gasoline Range Organics	ND	4.00	mo/ko dry		ND			0.22			_

Gasonne Range Organics	ND	4.00 mg/kg dry		ND			8.22	50
Surr: a,a,a-TFT (FID)	12.0	"	11.1		108	60-140		
Duplicate (1071099-DUP2) Gasoline Range Organics	Sour	Prepared & Analyzed: 07/10/			01			
	ND	2.64 mg/kg dry		ND				50
Surr: a.a.a-TFT (FID)	6.66	"	8.48		78.5	60-140		

4.00 mg/kg dry

ND

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Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 - Quality Control

North Creek Analytical - Portland

	110	th Cleek	Allalyl	ucai - P	<u>vi uanu</u>					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071114 - EPA 3550 Fuels										
Blank (1071114-BLK1)				Prepared:	07/11/01	Analyzed	i: 07/12/01			
Diesel Range Organics	ND	25.0	mg/kg			Tindiy Boo	07/12/01		<del></del>	
Residual Range Organics	ND	50.0	"							
Surr: 1-Chlorooctadecane	4.21		n	4.80	·	87.7	75-125			
Surr: Triacontane	4.55		"	6.25		72.8	50-150			
LCS (1071114-BS1)				Prepared:	07/11/01	Analyzed	t: 07/12/01			
Diesel Range Organics	110	25.0	mg/kg	129		85.3	60-130			
Residual Range Organics	80.6	50.0	"	79.0		102	60-130			
Surr: 1-Chlorooctadecane	3.46		"	4.80		72.1	75-125			S-0:
Surr: Triacontane	6.12		"	6.25		97.9	50-150			5-0.
LCS Dup (1071114-BSD1)				Prepared:	07/11/01	Analyzed	i: 07/13/01			
Diesel Range Organics	119	25.0	mg/kg	129		92.2	60-130	7.86	20	
Residual Range Organics	81.6	50.0	"	79.0		103	60-130	1.23	20	
Surr: 1-Chlorooctadecane	3.65		"	4.80		76.0	75-125	<del></del>		
Surr: Triacontane	6.44		**	6.25		103	50-150			
Duplicate (1071114-DUP1)	So	urce: P1G02	205-01	Prepared:	: 07/11/01	Analyzed	i: 07/12/01			
Diesel Range Organics	ND	25.0	mg/kg dry		ND				50	
Residual Range Organics	ND	50.0			ND				50	
Surr: 1-Chlorooctadecane	4.83		"	6.16		78.4	75-125			
Surr: Triacontane	7.58		"	8.03		94.4	50-150			
Duplicate (1071114-DUP2)	Se	urce: P1G0	206-07	Prepared	: 07/11/01	Analyzed	d: 07/12/01			
Diesel Range Organics	ND	25.0	mg/kg dry		ND				50	
Residual Range Organics	ND	50.0			ND				50	
Surr: 1-Chlorooctadecane	4.41		и	5.15		85.6	75-125			
Surr: Triacontane	8.57		"	6.71		128	50-150			
	•						• • • • • • • • • • • • • • • • • • • •			

North Creek Analytical - Portland

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%REC

Limits

**RPD** 

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Analyte

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** 

Issued: 07/30/01 16:44

**RPD** 

Limit

Notes

## Total Metals per EPA 6000/7000 Series Methods - Quality Control

<u>North</u>	Creek	Analy	<i>r</i> tical	- Po	rtiand

Units

Spike

Level

Source

Result

Reporting

Limit

Result

Blank (1071299-BLK1)				Drapared: 07/16/0	1 A1	1.05/04/04	
Arsenic	ND	0.500	ma/ka	Prepared: 07/16/0	Analyze	a: 07/21/01	
Barium	ND	1.00	mg/kg				
Cadmium	ND	0.500					
Chromium	ND	0.500	n				
Lead	ND	10.0	11				
Nickel	ND	1.00	и				R-06
Vanadium	ND	2.50	11				
LCS (1071299-BS1)				Dramand, 07/1//0	1 4 .1	1 05/20/04	
Arsenic	10.5	0.500	/	Prepared: 07/16/0		······································	
Barium	11.1		mg/kg	10.0	105	80-120	
C. 1 :	11.1	1.00	•	10.0	111	80-120	

Вагит	11.1	1.00	11				
Cadmium	11.1	1.00	"	10.0	111	80-120	
Caomium	10.6	0.500	11	10.0	106	80-120	
Chromium	11.3	-			100	60-120	
· ·	11.2	0.500	"	10.0	112	80-120	
Lead	10.8	10.0	n	0.01	108	80-120	
Nickel	,, ,				100	80-120	R-06
	11.5	1.00	"	10.0	115	80-120	
Vanadium	10.7	2.50	Ħ	10.0	107	80-120	
				10.0	107	80-120	

Duplicate (1071299-DUP1)	Sour	ce: P1G02	205-01	Prepared: 07/16/01 Analyzed:	07/21/01		
Arsenic	1.24		mg/kg dry			40	
Barium	30.0	1,00		31.7	16.6	40	
Cadmium	ND	0.500			5.51	40	
Chromium	10.2	0.500		ND		40	
Lead				9.98	2.18	40	
Nickel	ND	10.0		ND	0.00	40	R-06
	21.3	1.00		21.8	2.32	40	
1 anaoigii	57.2	2.50	"	53.1	7.43	40	
Vanadium	57.2	2.50	n				

Matrix Spike (1071299-MS1)	Source: P1G0205-01			Prepared:	07/16/01	Analyzed	d: 07/21/01		
Arsenic	14. I	0.500	mg/kg dry	12.8	1.05	102	75-125	 	
Barium	45.2	1.00	þi	12.8	31.7	105	75-125		
Cadmium	13.3	0.500	п	12.8	ND	104	75-125		
Chromium	21.3	0.500	11	12.8	9.98	88.4	75-125		
Lead	16.2	10.0	er e	12.8	ND	101	75-125		R-06
Nickel	30.4	1.00	"	12.8	21.8	67.2	75-125		Q-02
Vanadium	60.9	2.50	н	12.8	53.1	60.9	75-125		Q-02

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Bristol Environmental & Engineering

2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter Amended Report Issued: 07/30/01 16:44

#### Total Metals per EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Portland

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch 1071299 - EPA 3050

Matrix Spike (1071299-MS2)	Sour	Source: P1G0206-01			Prepared: 07/16/01		d: 07/21/01	
Arsenic	15.5	0.500	mg/kg dry	11.3	1.92	120	75-125	 
Barium	46.8	1.00		11.3	35.1	104	75-125	
Cadmium	14.1	0.500	Ħ	11.3	ND	125	75-125	
Chromium	25.6	0.500	P	11.3	15.0	93.8	75-125	
Lead	16.7	0.500	r	11.3	4.44	108	75-125	
Nickel	32.0	1.00	11	11.3	18.6	119	75-125	
Vanadium	99.1	2.50	n	11.3	120	NR	75-125	Q-14

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 21(1901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

## Polychlorinated Biphenyls per EPA Method 8082 - Quality Control

	1401	rui Creek	Analy	ncal - Po	ortland					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071014 - EPA 3550										
Blank (1071014-BLK1)				Prepared:	07/09/01	Anglyzed	l: 07/14/01			-
Aroclor 1016	ND	67.0	ug/kg	op.a.ou.	01/02/01	2 Mary 200	. 07/14/01			
Aroclor 1221	ND	134	" "							
Aroclor 1232	ND	67.0	**							
Aroclor 1242	ND	67.0	**							
Aroclor 1248	ND	67.0	ir .							
Aroclor 1254	ND	67.0	n							
Aroclor 1260	ND	67.0	<b>«</b>							
Surr: 2,4.5,6-Tetrachloro-m-xylene	32.3			33.3	~ ~~	97.0	63-119			
Surr: Decachlorobiphenyl	<i>35.7</i>		**	33.3		107	52-131			
LCS (1071014-BS1)				Prepared:	07/09/01	Analyzed	: 07/14/01			
Aroclor 1016	360	67.0	ug/kg	333	07/07/01	108	57-132			
Aroclor 1260	329	67.0	"	333		98.8	60-136			
Surr: 2,4,5,6-Tetrachloro-m-xylene	32.8		,,	33.3		98.5	63-119			
Surr: Decachlorobiphenyl	36.6		"	33.3		110	52-131			
Matrix Spike (1071014-MS1)	Sour	ce: P1G01	120-01	Prepared:	07/09/01	Analyzed	: 07/14/01			
Aroclor 1016	428	67.0	ug/kg dry	382	ND	112	57-132			
Aroclor 1260	337	67.0	11	382	ND	88.2	60-136			
Surr: 2,4,5,6-Tetrachloro-m-xylene	37.8		<u>-</u>	38.2		99.0	63-119			
Surr: Decachlorobiphenyl	35.7		"	38.2		93.5	52-131			
Matrix Spike Dup (1071014-MSD1)	Sour	ce: P1G01	20-01	Prepared:	07/09/01	Analyzed	: 07/14/01			
Aroclor 1016	386	67.0	ug/kg dry	382	ND	101	57-132	10.3	50	
Aroclor 1260	310	67.0	" " " " " " " " " " " " " " " " " " " "	382	ND	81.2	60-136	8.35	50	
Surr: 2,4,5,6-Tetrachloro-m-xylene	36.4		"	38.2		95.3	63-119			
Surr: Decachlorobiphenyl	33.8		11	38.2		88.5	52-131			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Aroclor 1260

Surr: 2,4,5,6-Tetrachloro-m-xylene

Surr: Decachlorobiphenyl

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

**RPD** 

### Polychlorinated Biphenyls per EPA Method 8082 - Quality Control

North Creek Analytical - Portland

Spike

Source

ND

99.5

83.3

109

372

37.2

37.2

Reporting

370

31.0

40.5

67.0

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071259 - EPA 3550										
Blank (1071259-BLK1)				Prepared:	07/14/01	Analyzed	l: 07/18/01			
Aroclor 1016	ND	67.0	ug/kg							
Aroclor 1221	ND	134	н							
Aroclor 1232	ND	67.0	Ħ							
Aroclor 1242	ND	67.0	n							
Aroclor 1248	ND	67.0	H							
Aroclor 1254	ND	67.0	**							
Aroclor 1260	ND	67.0	•							
Surr: 2,4,5,6-Tetrachloro-m-xylene	31.7		'n	33.3	··	95.2	63-119			
Surr: Decachlorobiphenyl	36.5		*	33.3		110	52-131			
LCS (1071259-BS1)				Prepared:	07/14/01	Analyzed	l: 07/1 <b>8</b> /01			
Aroclor 1016	367	67.0	ug/kg	333		110	57-132			
Aroclor 1260	360	67.0	10	333		108	60-136			
Surr: 2,4,5,6-Tetrachloro-m-xylene	35.0		,,	33.3		105	63-119			
Surr: Decachlorobiphenyl	41.0		"	33.3		123	52-131			
Matrix Spike (1071259-MS1)	So	urce: P1G02	208-01	Prepared:	: 07/14/01	Analyzed	i: 07/18/01			
Aroclor 1016	323	67.0	ug/kg dry	372	ND	86.8	57-132	••		
Aroclor 1260	359	67.0	n	372	ND	96.5	60-136			
Surr: 2,4,5,6-Tetrachloro-m-xylene	29.8		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	37.2		80.1	63-119			
Surr: Decachlorobiphenyl	40.0		"	37.2		108	<i>52-131</i>			
Matrix Spike Dup (1071259-MSD1)	So	urce: P1G0	208-01	Prepared	: 07/14/01	Analyze	d: 07/18/01			
Aroclor 1016	340	67.0	ug/kg dry	372	ND	91.4	57-132	5.13	50	

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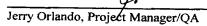
60-136

63-119

52-131

3.02

50





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2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 21(1901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** 

Issued: 07/30/01 16:44

## Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

				12001	or cialla						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	

#### Batch 1071265 - EPA 5035

Blank (1071265-BLK1)				Prepared: 07/14/01 Analyzed: 07/15/01
Acetone	ND	25.0	ug/kg	The state of the s
Benzene	ND	1.00	"	
Bromobenzene	ND	1.00	,,	
Bromochloromethane	ND	1.00	**	
3romodichloromethane	ND	1.00	n	
Bromoform	ND	1.00	**	
Bromomethane	ND	5.00	н	
2-Butanone	ND	10.0	n	
n-Butylbenzene	ND	5.00	11	
sec-Butylbenzene	ND	1.00	**	
ert-Butylbenzene	ND	1.00	11	
Carbon disulfide	ND	10.0	n	
Carbon tetrachloride	ND	1.00	4	
Chlorobenzene	ND	1.00		
Chloroethane	ND	1.00	1)	
Chloroform	ND	1.00	11	
Chloromethane	ND	5.00	11	
2-Chlorotoluene	ND	1.00	**	
1-Chlorotoluene	ND	1.00	77	
1,2-Dibromo-3-chloropropane	ND	5.00	**	
Dibromochloromethane	ND	1.00	**	
1,2-Dibromoethane	ND	1.00	11	
Dibromomethane	ND	1.00		
1,2-Dichlorobenzene	ND	1.00	"	
1.3-Dichlorobenzene	ND	1.00	77	
1,4-Dichlorobenzene	ND	1.00	*	
Dichlorodifluoromethane	ND	5.00	**	
1,1-Dichloroethane	ND	1.00	**	
1,2-Dichloroethane	ND	1.00	lt.	
1,1-Dichloroethene	ND	1.00	**	
cis-1,2-Dichloroethene	ND	1.00	**	
rans-1,2-Dichloroethene	ND	1.00	n	
1,2-Dichloropropane	ND	1.00	"	
1,3-Dichloropropane	ND	1.00	n	
2,2-Dichloropropane	ND	1.00	н	
1,1-Dichloropropene	ND	1.00	н.	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Analyte

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** Issued: 07/30/01 16:44

**RPD** 

## Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Units

Spike

Level

Source

Reporting

Limit

Result

ND

17.9

20.4

20.2

19.5

2.00

20.0

20.0

20.0

20.0

	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071265 - EPA 5035										
Blank (1071265-BLK1)				Dranavada	07/14/01	4 1 1	0.5.15.0.10.1		-	
cis-1,3-Dichloropropene	ND	1.00	ug/kg	1 repareu.	07/14/01	Analyzed	: 07/15/01			
trans-1,3-Dichloropropene	ND	1.00	u <sub>E</sub> /ng							
Ethylbenzene	ND	1.00	77							
Texachlorobutadiene	ND	2.00	n							
2-Hexanone	ND	10.0								
sopropylbenzene	ND	2.00	"							
o-Isopropyltoluene	ND	2.00	"							
l-Methyl-2-pentanone	ND	5.00	**							
Methyl tert-butyl ether	ND	1.00	н							
Methylene chloride	ND	5.00	•							
Naphthalene	ND	2.00	**							
n-Propylbenzene	ND	1.00								
Styrene	ND	1.00	п							
,1,1,2-Tetrachloroethane	ND	1.00								
,1.2.2-Tetrachloroethane	ND	1.00								
fetrachloroethene	ND	1.00	*							
Toluene	ND	1.00	Ħ							
,2,3-Trichlorobenzene	ND	1.00	n							
.2,4-Trichlorobenzene	ND	1.00	n							
.1,1-Trichloroethane	ND	1.00	71							
,1,2-Trichloroethane	ND	1.00	*							
richloroethene	ND	1.00	**							
richlorofluoromethane	ND	1.00	н							
.2,3-Trichloropropane	ND	1.00								
.2,4-Trimethylbenzene	ND	1.00	19							
,3,5-Trimethylbenzene	ND	1.00	11							
/inyl chloride	ND	1.00	**							
-Xylene	ND	1.00	н							
n n Vydana		1.00								

North Creek Analytical - Portland

m,p-Xylene

Surr: 4-BFB

Surr: 1.2-DCA-d4

Surr: Toluene-d8

Surr: Dibromofluoromethane

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70-130

70-130

70-130

70-130

89.5

102

101

97.5



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Bristol Environmental & Engineering

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Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

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## Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071265 - EPA 5035										110103
LCS (1071265-BS1)	***************************************	<del></del>	· · · · · · · · · · · · · · · · · · ·	Prepared	07/14/01	Analyzed	. 07/15/01			
Benzene	21.6	1.00	ug/kg	20.0	. 0771-7701	108	80-135			
Chlorobenzene	22.3	1.00	ug/Kg	20.0		112				
1,1-Dichloroethene	20.0	1.00	**	20.0		100	80-135 60-150			
Toluene	22.6	1.00	н	20.0		113	80-130 80-130			
Trichloroethene	21.2	1.00	**	20.0		106	70-135			
Surr: 4-BFB	21.1		n	20.0			·-··· .			
Surr: 1,2-DCA-d4	20.8		**	20.0		106 104	70-130			
Surr: Dibromofluoromethane	21.2		"	20.0		104 106	70-130 70-130			
Surr: Toluene-d8	20.7		"	20.0		104	70-130 70-130			
LCS Dup (1071265-BSD1)				Prepared:	: 07/14/01	Analyzed	: 07/15/01			
Benzene	17.9	1.00	ug/kg	20.0		89.5	80-135	18.7	25	
Chlorobenzene	18.5	1.00	"	20.0		92.5	80-135	18.6	25	
1,1-Dichloroethene	16.4	1.00	n	20.0		82.0	60-150	19.8	25	
Toluene	18.2	1.00	11	20.0		91.0	80-130	21.6	25	
Trichloroethene	17.0	1.00	n	20.0		85.0	70-135	22.0	25	
Surr: 4-BFB	20.9	***************************************	"	20.0		104	70-130			
Surr: 1,2-DCA-d4	20.3		n	20.0		102	70-130			
Surr: Dibromofluoromethane	21.2		n	20.0		106	70-130			
Surr: Toluene-d8	20.6		n	20.0		103	70-130			
Matrix Spike (1071265-MS1)	Soi	ırce: P1G02	05-01	Prepared:	: 07/14/01	Analyzed	: 07/15/01			
Benzene	1880	66.1	ug/kg dry	1700	ND	111	60-135			
Chlorobenzene	1950	66.1	n	1700	ND	115	65-125			
1,1-Dichloroethene	1960	66.1	11	1700	ND	115	60-135			
Toluene	1950	66.1	**	1700	ND	115	60-125			
Trichloroethene	1850	66.1	11	1700	ND	109	60-125			
Surr: 4-BFB	17.3		,,	17.0		102	70-130			
Surr: 1,2-DCA-d4	16.6		*	17.0		97.6	70-130			
Surr: Dibromofluoromethane	17.5		n	17.0		103	70-130			
Sure: Tolerone do										

17.0

18.0

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Surr: Toluene-d8

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%REC

Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Analyte

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Spike

Source

**Amended Report** Issued: 07/30/01 16:44

**RPD** 

# Volatile Organic Compounds per EPA Method 8260B Quality Control

North Creek Analytical - Portland

Reporting

Limit

Result

	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071265 - EPA 5035										
Matrix Spike Dup (1071265-MSD1)	Sour	ce: P1G02	205-01	Prepared:	07/14/01	A 1 1	054550		··	
Benzene	1870	66,1		1700			: 07/15/01			
Chlorobenzene	1950		ug/kg dry		ND	110	60-135	0.533	25	
1,1-Dichloroethene		66.1	•	1700	ND	115	65-125	0.00	25	
Toluene	1980	66.1	11	1700	ND	116	60-135	1.02	25	
	1990	66.1	er	1700	ND	117	60-125	2.03		
Trichloroethene	1850	66.1	Ħ	1700	ND				25	
Surr: 4-BFB					ND	109	60-125	0.00	25	
Surr: 1.2-DCA-d4	17.4		"	17.0		102	70-130			
	16.2		n	17.0		95.3	70-130			
Surr: Dibromofluoromethane	17.6		*							
Surr: Toluene-d8				17.0		104	70-130			
-	18.0		"	17.0		106	70-130			

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2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Amended Report Issued: 07/30/01 16:44

## Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

North Creek Analytical - Portland

İ										
Analyte		Reporting		Spike	Source		%REC		RPD	Į.
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch	1071	164 -	EDA	3550
Datti	3V/I	1114 -	r.PA	.33311

Blank (1071164-BLK1)				Prepared: 07/12/01	Analyzeo	1: 07/16/01	
Acenaphthene	ND	13.4	ug/kg		7 Hairy 200		
Acenaphthylene	ND	13.4	"				
Anthracene	ND	13.4	"				
Benzo (a) anthracene	ND	13.4	*				
Benzo (a) pyrene	ND	13.4	=				
Benzo (b) fluoranthene	ND	13,4	*				
Benzo (ghi) perylene	ND	13.4	11				
Benzo (k) fluoranthene	ND	13.4	n				
Chrysene	ND	13.4	tt .				
Dibenzo (a,h) anthracene	ND	13.4	**				
Fluoranthene	ND	13.4	11				
Fluorene	ND	13.4					
Indeno (1,2,3-cd) pyrene	ND	13.4	Ħ				
Naphthalene	ND	13.4	•				
Phenanthrene	ND	13.4	11				
Pyrene	ND	13.4	н				
Surr: Fluorene-d10	66.9		- "	83.3	80.3	40-150	
Surr: Pyrene-d10	96.5		"	83.3	116	40-150	
Surr: Benzo (a) pyrene-d12	72.5		"	83.3	87.0	40-150	
LCS (1071164-BS1)				Prepared: 07/12/01	Analyzed	1: 07/16/01	
Acenaphthene	125	13.4	ug/kg	167	74.9	33-139	
Benzo (a) pyrene	141	13.4		167	84.4	45-149	
Рутепе	150	13.4	**	167	89.8	39-138	
Surr: Fluorene-d10	66.4		,,	83.3	79.7	40-150	
Surr: Pyrene-d10	97.1		"	83.3	117	40-150	
Surr: Benzo (a) pyrene-d12	74.3		"	83.3	89.2	40-150	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

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## Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071164 - EPA 3550										
Matrix Spike (1071164-MS1)	Source: P1G0123-17 Pre		Prepared:	07/12/01	Apalyzad	l: 07/16/01				
Acenaphthene	152	67.0		193	ND	74.2				R-05
Benzo (a) pyrene	180	67.0	" " " " " " " " " " " " " " " " " " "	193	ND		33-139			
Рутепе	204	67.0				93.3	45-149			
Surr: Fluorene-d10				193	ND	101	39-138			
	77.8		"	96.3		80.8	40-150			
Surr: Pyrene-d10	124		"	96.3		129	40-150			
Surr: Benzo (a) pyrene-d12	93.2		"	96.2		96.9	40-150			
Matrix Spike Dup (1071164-MSD1)	Sou	rce: P1G01	23-17	Prepared:	07/12/01	Anglyzod	: 07/16/01			
Acenaphthene	169	67.0		193	ND	83.0		10.6		R-05
Benzo (a) pyrene	194	67.0	"	193			33-139	10.6	60	
Рутепе	219	67.0	*		ND	101	45-149	7.49	60	
Surr: Fluorene-d10		07.0		193	ND	109	39-138	7.09	60	
	92.4		**	96.3		96.0	40-150		· · · · · · · · · · · · · · · · · · ·	
Surr: Pyrene-d10	137		"	96.3		142	40-150			
Surr: Benzo (a) pyrene-d12	101		n	96.2		105	40-150			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

**Amended Report** 

Issued: 07/30/01 16:44

### Percent Dry Weight (Solids) per Standard Methods - Quality Control

	Nort	<u>h Creek Analy</u>	tical - P	<u>ortland</u>				
Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1071131 - Dry Weight							· · · · · · · · · · · · · · · · · · ·	
Duplicate (1071131-DUP1)	Soui	Prepared	: 07/11/01	Analyzed: 07/12/0	[			
% Solids	86.7	86.7 1.00 % by Weigh				0.575	20	
Duplicate (1071131-DUP2)	Soui	Prepared	: 07/11/01	Analyzed: 07/12/0	l			
% Solids	77.5	1.00 % by Weig		74.5		3.95	20	
Duplicate (1071131-DUP3)	Sour	rce: P1G0120-03	Prepared	: 07/11/01	Analyzed: 07/12/0	1		
% Solids	73.4	1.00 % by Weig		76.1		3.61	20	··········
Duplicate (1071131-DUP4)	Sour	rce: P1G0064-03	Prepared	: 07/11/01	Analyzed: 07/12/0	[		
% Solids	98.6	1.00 % by Weig		98.9		0.304	20	
<b>Duplicate (1071131-DUP5)</b>	Sou	rce: P1G0064-04	Prepared	: 07/11/01	Analyzed: 07/12/0	ţ		
% Solids	95.1	1.00 % by Weig	<del></del>	95.2	•	0.105	20	**

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

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#### **Notes and Definitions**

	Notes and Definitions
Q-01	The spike recovery, and/or RPD, for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
Q-02	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
Q-06	Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.
Q-14	The Spike Recovery and/or RPD is outside of control limits due to a non-homogeneous sample matrix.
R-03	The reporting limit for this analyte was raised due to matrix interference.
R-05	Reporting limits raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.
R-06	The reporting limit for this analyte was raised due to possible laboratory contamination of the sample or extract.
S-07	Surrogate recovery is out of control limits. QA criteria are met when one surrogate is within control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
wet	Sample results reported on a wet weight basis (as received)
RPD	Relative Percent Difference